

**VERSION WITH MARKINGS SHOWING CHANGES MADE**

Claims 39 and 40 are added in this Preliminary Amendment.

39. (New) The method of claim 1 wherein the mass spectra are derived from a surface enhanced laser desorption/ionization process using a substrate comprising an affinity material, wherein the affinity material comprises antibodies.

40. (New) A method for classifying an unknown sample into a class characterized by a biological status using a digital computer, the method comprising:

a) entering data obtained from a mass spectrum of the unknown sample into a digital computer, wherein the mass spectrum is derived from a surface enhanced laser desorption/ionization process using a substrate comprising an affinity material, wherein the affinity material comprises antibodies; and

b) processing the mass spectrum data using the classification model formed by the method of claim 1 to classify the unknown sample in a class characterized by a biological status.